



WRITTEN STATEMENT OF
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DIRECTOR OF PUBLIC POLICY &
GENERAL COUNSEL,
SAFE KIDS WORLDWIDE
ON
POOL & SPA SAFETY FOR CHILDREN

May 3, 2006

Subcommittee Hearing

Senate Commerce, Science and Transportation
Subcommittee on Consumer Affairs, Product Safety and Insurance

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My name is Alan Korn, and I am the Director of Public Policy and General Counsel for Safe Kids Worldwide. It is my pleasure to testify before the Senate Consumer Affairs, Product Safety and Insurance Subcommittee today. Mr. Chairman and Senator Pryor, thank you for allowing me to address the important topic of pool and spa safety, as drowning is a leading killer of children ages 14 and under.

I. History of Safe Kids Worldwide

Safe Kids Worldwide is the first and only international organization dedicated solely to addressing an often under recognized problem: ***More children ages 14 and under are being killed by what people call “accidents” (motor vehicle crashes, fires, drownings and other injuries) than by any other cause.*** Formerly known as the National SAFE KIDS Campaign, Safe Kids Worldwide unites more than 450 coalitions in 16 countries, bringing together health and safety experts, educators, corporations, foundations, governments and volunteers to educate and protect families against the dangers of accidental injuries.

Founded in 1987 by the Children’s National Medical Center and with support from Johnson & Johnson, Safe Kids Worldwide relies on developing injury prevention strategies that work in the real world – conducting public outreach and awareness campaigns, organizing and implementing hands-on grassroots events, and working to make injury prevention a public policy priority.

The ongoing work of Safe Kids coalitions reaching out to local communities with injury prevention messages has contributed to the more than 40 percent decline in the childhood unintentional injury death rate during the past 15 years. However, with one out of every five children – or nearly 12 million children ages 14 and under – sustaining injuries serious enough to require medical attention each year, Safe Kids Worldwide remains committed to reducing unintentional injury by implementing prevention strategies and increasing public awareness of the problem and its solutions.

II. The Problem: Accidental Childhood Drowning in Swimming Pools and Spas

While water recreation provides hours of enjoyment and exercise for children, water and children can be a deadly mix when an unsafe environment or inadequate supervision is also present. In the United States, drowning remains the second leading cause of accidental injury-related death

among children ages 1 to 14 and the leading cause of accidental-injury related death among kids ages 1 to 4. In 2003, 782 children ages 14 and under died as a result of accidental drowning and in 2004, an estimated 3,702 children in this age group were treated in emergency rooms for near-drowning, which often results in lifetime injuries, including permanent brain injuries. Of these drowning deaths, an estimated forty percent occur in pools. The vast majority of these deaths were due to children having unfettered or very easy access to pools/spas or as a result of adults not properly supervising children who were in the pool with permission. (For more statistics, see Attachment A: Backgrounder on Pool and Spa Safety.)

Swimming pools and spas also present hidden dangers for children (and adult bathers and swimmers): the risk of drain entrapment. Entrapment occurs when part of a child becomes attached to a drain because of the powerful suction of a pool or spa's water circulation system. This happens much the same way one's hand might get stuck to the hose end of a vacuum cleaner. Young children are captivated with the suction created by a pool or spa circulation system, often playing in the suction path to feel the powerful pull of the water. This is often referred to as an "attractive nuisance". That "nuisance" is magnified by the lack of awareness by most consumers (especially children) and the aging of pools in this country. Death or serious injury can occur when the force of the suction overpowers the child's ability to disengage from the drain and rise to the surface of the water. Often, the strength of an adult is still not enough to remove a child trapped by a pool or spa's drainage system. This risk, unlike the more common form of drowning described above, has nothing to do with the lack of proper adult supervision, but has everything to do with engineering flaws in the way pools are built and maintained.

There are at least five different types of suction entrapment:

- 1) Body Entrapment – where a suction of the torso becomes entrapped;
- 2) Limb Entrapment – where an arm or leg is pulled into an open drain pipe;
- 3) Hair Entanglement/Entrapment – where hair is pulled in and wrapped around the grate of a drain cover;
- 4) Mechanical Entrapment – where jewelry or part of a bathing suit becomes caught in the drain or grate; and
- 5) Evisceration – where the victim's buttocks comes in contact with the pool suction outlet and he/she is disemboweled.

Each of these "entrapments" almost always results in death or permanent serious injury.

From 1985 to 2004, records show that at least 33 children ages 14 and under died as a result of pool and spa entrapment, and nearly 100 children were seriously injured. Entrapment deaths can also occur when a child's hair or swimsuit gets tangled in the drain or on an underwater object, such as a ladder. Forty-one percent of the deaths were hair-related entrapments. Fifty-two percent of these fatalities occurred in spas or hot tubs, thirty-nine percent in swimming pools, and nine percent in combination pool/spas.

However, according to the U.S. Consumer Product Safety Commission (CPSC) and Safe Kids Worldwide, the number of entrapment deaths could be much higher than reported. Due to the fact that entrapment is a little-known risk for drowning, it is possible that many drowning deaths

have not been classified as entrapment and that the number of deaths is probably higher than reported. For example, in the case of Nancy Baker's daughter and former Secretary of State James Baker's granddaughter, Graeme's cause of death was listed as a "drowning" only with no mention of the mechanism of the fatality on the death certificate. Safe Kids believes that this type of incomplete characterization happens more often than not, and therefore, the actual incidences of entrapment/entanglement/evisceration is much higher than reported.

As pools and spas become more common among consumers and existing pools and spas age and require maintenance, the potential risk of injuries and deaths from entrapment increases. The number of residential swimming pool owners increased by approximately 600,000 from 2002 to 2004, and the number of residential spa owners increased by about 800,000 over the same period.

Drowning, in all its forms, is usually quick and silent. A child will lose consciousness two minutes after submersion, with irreversible brain damage occurring within four to six minutes. The majority of children who survive without neurological consequences are discovered within two minutes of submersion, and most children who die are found after 10 minutes.

For children who do survive, the consequences of near-drowning can be devastating. As many as 20 percent of near-drowning survivors suffer severe, permanent neurological disability, the effects of which often result in long-lasting psychological and emotional trauma for the child, his or her family and their community. Near-drownings also take a tremendous financial toll on affected families and society as a whole. Typical medical costs for a near-drowning victim can range from \$75,000 for initial treatment to \$180,000 a year for long-term care. The total cost of a single near-drowning that results in brain injury can be more than \$4.5 million. The total annual lifetime cost of drowning among children ages 14 and under is approximately \$5.7 billion, with children ages 4 and under accounting for \$3.4 billion, or nearly half, of these costs.

III. The Solution: Layers of Protection and Active Supervision

As a result of these alarming statistics, Safe Kids has promoted two primary ways to prevent pool and spa drownings and entrapments: safety devices to guard the pool and prevent entrapment, and active supervision.

A. Use of Environmental Safety Devices: Layers of Protection

1. Four-Sided/Isolation Fencing

One of the most effective ways to reduce child drownings in residential pools is to construct and maintain barriers to prevent young children from gaining unsupervised access to pools. Studies show that installation and proper use of four-sided isolation fencing could prevent 50 to 90 percent of residential pool drowning and near-drowning incidents among children. Isolation fencing (enclosing the pool completely) is more effective than perimeter fencing (enclosing property and the pool) because it prevents children from accessing the pool area through the house. If

the house is part of the barrier, the doors and windows leading to the pool should be protected, at the very least, by an alarm or a powered safety cover for the pool. Safe Kids also recommends that pool fences have a secure, self-closing, self-latching gate and also isolate the pool from the residence. The CPSC has crafted suggested recommendations, entitled *Safety Barrier Guidelines for Home Pools*, which details specifically how pool owners and pool installation companies should construct fencing to best prevent the unsupervised access to pools by children. Some localities and a few states have used these guidelines as a basis for their own laws.

2. Anti-Entrapment Drain Covers

In addition to the barriers to the water, there are other devices designed specifically to protect against entrapment. Another layer of protection involves the installation of anti-entrapment drain covers. Anti-entrapment drain covers are recommended to help prevent the suction from drawing the body or hair into the drain. Anti-entrapment drain covers are not flush to the bottom of the pool or spa, like many dangerous grates and outlet covers in pools/spas today. Anti-entrapment covers are drain fittings that are specifically designed to prevent the circular or swirling motion of the water that tends to form a vacuum or suction and draws hair or the body into the drain pipe. Safe Kids recommends that pool owners (both private owners and commercial operators) have their pools/spas inspected by pool maintenance professionals for dangerous or broken covers and have them replaced with safer covers before pools/spas are used for the summer. These drain covers have a retail price of approximately \$30 – \$60.

3. Safety Vacuum Release Systems

Safety vacuum release systems (SVRS) are intended to detect any blockage of a drain, automatically and immediately shutting off the suction to prevent entrapment. This immediate shut off feature eliminates the need for a witness to an entrapment, usually a panicked family member, from searching around for the on/off switch to turn off the pool pump. The search costs precious seconds and usually by the time the switch is found, it is too late. These safety devices have a suggested retail price between \$375 – \$800.

4. Dual Drains

To ensure a safe environment, Safe Kids advises pool and spa owners to install multiple drains, not just one, in order to decrease the amount of suction at the drain site. Although this safety adaptation is admittedly costly and labor intensive for existing pools since the bottom of the pool would have to be dug up, this safety feature should be a part of the construction for all new pools and spas being built.

The CPSC recommends each of these safety devices (safer drain covers, SVRS and dual main drains) as a way to reduce the risk of entrapment, entanglement and evisceration.

See the CPSC's *Guidelines for Entrapment Hazards: Making Pools and Spas Safer* (March 2005).

Safe Kids also believes that pool service companies, and in particular, their technicians, need to be better educated about these “layers of protection” and should more regularly inform pool owners and operators about these important environmental changes and safety devices. The pool service visit each May should not only include preparing the pool for the summer’s activities, but should also include an inspection for these hidden hazards and installation of the appropriate layers of protection.

B. Active Supervision of Children

In addition to environmental precautions, parents and caregivers must also actively supervise children whenever water is present. Unfortunately, many parents do not realize the importance of active supervision around water at all times. Active supervision means that a parent or caregiver is giving undivided attention to the child and is close enough to help the child in case of emergency.

In a previous Safe Kids’ study, research revealed that nine of out of ten children who drowned were being supervised. Our 2004 study, *Clear Danger: A National Study of Childhood Drowning and Related Attitudes and Behaviors*, showed that in 88 percent of drowning cases reviewed, the victim was under some form of supervision when he or she drowned – in most cases, being supervised by a family member. Forty-six percent of drowning victims were in the care of a parent at the time of the incident. Twenty-six percent were in the care of a relative other than a parent, including 5 percent in the care of a sibling younger than 18 years of age and 6 percent in the care of a grandparent. These results are consistent with past studies indicating that childhood drownings and near-drownings typically occur when a child is left unattended or during a brief lapse in supervision.

In that survey, nearly all parents (94 percent) reported that they always actively supervise their children while swimming. However, deeper examination revealed that parents participated in a variety of distracting behaviors while supervising, including talking to others (38 percent), reading (18 percent), eating (17 percent), talking on the phone (11 percent) and even closing their eyes and relaxing (4 percent).

Safe Kids was alarmed at the disconnect between parents recognizing the potential danger of water activities and their subsequent lack of full attention when supervising their children. As a result of these findings, Safe Kids and its coalitions will continue to promote the proper practice of active supervision, especially as kids are in and around water this summer season.

IV. Safe Kids’ Support of the *Pool and Spa Safety Act*

Safe Kids knows that installation of the layers of protection will go a long way to protecting children from the potential dangers of residential and publicly-operated pools and spas. Four states have enacted residential pool fencing laws and no state has a comprehensive pool safety

law on its books. Accordingly, Safe Kids strongly supports the enactment of the *Pool and Spa Safety Act* and applauds Congresswoman Debbie Wasserman Schultz for her leadership in introducing this legislation. We also commend former Secretary of State James Baker and Nancy Baker for sharing their personal story about the loss of Virginia Graeme Baker and for their advocacy efforts in support of this important piece of legislation.

The *Pool and Spa Safety Act* is intended to increase the safety of swimming pools and spas by motivating states to pass laws that incorporate the layers of protection in order to help prevent drowning, entrapment and hair entanglements. If enacted, the legislation would provide incentive grants to states that call for all swimming pools and spas to have the following layers of protection:

- A wall, fence or barrier that entirely encloses the pool;
- Self-closing and self-latching gates for any walls, fences or barriers;
- A drain system that contains two suction outlets per pump (for new pools only);
- A safety suction outlet drain cover that meets the CPSC's guidelines; and
- A safety vacuum release system.

Congressional incentive grants to encourage states to pass safety legislation are not a new concept. Congress has used this mechanism often to promote state transportation safety laws, some of which are included in the recently passed SAFETEA-LU federal highway law. Safe Kids believes that the *Pool and Spa Safety Act* could do for pool safety what incentive grants have done for booster seat child occupant protection laws, primary enforcement safety belt laws, .08 drunk driving laws and open container prohibition laws.

The bill also has two important industry and consumer awareness/education components. First, the bill would require states to use at least 50 percent of the awarded grant to hire and train personnel to properly enforce the law, and to educate pool construction/installation companies, pool service companies and consumers about the new law and about drowning prevention tips.

In addition, passage of the legislation would enable national public education programs on pool and spa safety to be implemented through the CPSC and partner organizations. The need for this type of consumer awareness program is overwhelming. Safe Kids, in its most recent research, has found that the vast majority of American pool and spa owners do not install many of the recommended devices in and around their pools and spas. The legislation attempts to address this lack of appropriate safety devices. Swimming pool owners would be targeted with information on ways to prevent drowning and entrapment, and educational materials would be designed and disseminated through pool manufacturers, pool service companies and pool supply retail outlets.

Safe Kids hopes that the Senate considers a companion bill to the *Pool and Spa Safety Act*.

V. Safe Kids Week 2006: *Safe Pools for Safe Kids*

As a result of the deaths and injuries due to drowning and entrapment, Safe Kids Worldwide will be launching a water safety initiative, *Safe Pools for Safe Kids*, during Safe Kids Week 2006

(May 6 to 13). National Safe Kids Week has been held annually for 13 years and has been supported each of these years by Johnson & Johnson. This year's theme is *Safe Pools for Safe Kids* and more than 300 Safe Kids Week events will take place across the nation to educate parents and pool/spa owners about how to keep kids safe from drowning.

A. Safe Kids Week 2006 Programmatic Components

This year our campaign will include the following:

1. Safe Kids Local Community Events

Our national network of 300+ coalitions and chapters will be conducting educational programming efforts to educate parents about pool and spa safety. These include community safety events at local venues, including schools, neighborhood pools, and home and garden shows.

Many of our Safe Kids coalitions will also be lobbying their state legislatures about the importance of the "layers of protection" and, hopefully, helping to introduce our Safe Kids model pool safety legislation that addresses both traditional drowning incidents and the entrapment risks.

2. Johnson & Johnson's national advertising campaign

Through a partnership with Turner Broadcasting, six public service announcements on the importance of active supervision and proper pool barriers were created. These spots will run on Turner Networks throughout the summer, such as CNN, Turner Sports, TNT, TBS and the Cartoon Network, reaching millions of families and pool owners.

3. Release of our new research study

Safe Kids' new report, *Pool and Spa Drowning: A National Study of Drain Entrapment and Pool Safety Measures*, was released yesterday in our national news conference. (More information below.)

4. Distribution of our consumer education pieces

Through our coalitions, Safe Kids consumer educational materials on pool and spa safety will be disseminated in communities during Safe Kids Week and beyond. In addition, this information will be included on the Safe Kids website (www.usa.safekids.org). Important safety messages to parents and caregivers are highlighted in both the print and online materials and include the following tips:

- **Warn your children** about the dangers of drain entanglement and entrapment, and teach them to stay away from the drain.

- **Install protection to prevent entrapment** if you own a pool or spa. Protective measures include anti-entrapment drain covers, multiple drains in new construction, and a device to automatically release the suction and shut down the pump should entrapment occur.
- **Actively supervise your children around water**, and have a phone nearby to call for help in an emergency.
- **Ensure your pool has fencing around all sides and a self-closing, self-latching gate**, to prevent a child from wandering into the pool area unsupervised. In addition, spas should be covered and locked when not in use.
- **Install a door alarm**, a window alarm or both on the side of the house facing the pool or spa to alert you if a child wanders into the pool or spa area unsupervised.
- **Tie up long hair securely** so that it will not get caught in a pool or spa drain.

Coalitions will also be distributing copies of our Water Watcher Card, which helps promote the concept of active supervision. Adults who are designated Water Watchers are responsible for actively supervising children in and around water during parties and other gatherings. The Water Watcher Card, worn around the adult's neck, also contains important information about what to do in case of an emergency. (For examples of our educational materials, see Attachment B: Pool and Hot Tub Safety Brochure and Attachment C: Water Watcher Card.)

Our Safe Kids educational materials will also be supplemented by a retail component sponsored by Johnson & Johnson. Due to their support, consumers will be targeted with pool and spa safety messages in the May 7th coupon insert in the Sunday newspaper and through in-store retail print materials from participating outlets. Consumers will also be able to pick up copies of the Water Watcher Card.

B. Key Findings of *Pool and Spa Drowning: A National Study of Drain Entrapment and Pool Safety Measures*

Key to our efforts is the release of our new research study, *Pool and Spa Drowning: A National Study of Drain Entrapment and Pool Safety Measures* (Attachment D). Our goal: to better understand why kids drown in pools and spas and what can be done to prevent these needless tragedies. Through our research, we discovered that:

- ***Parents are not aware enough of the risk of their children drowning.*** Only a third (34 percent) of parents recognized that drowning is one of the top two causes of accidental death among children. In the South and West, where the largest number of drowning

deaths occur, only 39 percent and 35 percent of parents, respectively, were aware of this risk.

- ***Parents are not aware enough of the risk of entrapment.*** This finding is particularly alarming because research also reveals that pool and spa ownership is becoming more popular. A significant number of parents (29 percent) are not at all aware of the risk of entrapment. While one out of two parents report that they have a pool or spa at home (49 percent), 26 percent of these pool and spa-owning parents are not at all informed about ensuring the safety of their pool or spa drain.
- ***Although devices are available to prevent drowning, entrapment and entanglement, pool and spa owning parents are not likely to have them installed.*** Only 15 percent of pool and spa owning parents had anti-vortex drain covers and 12 percent had safety vacuum release systems in place. Only 28 percent had isolation fencing; 50 percent had perimeter fencing; and 34 percent had self-closing, self-latching gates.
- ***While the majority of parents actively supervise their preschool children, parents tend to become less attentive as the children grow older.*** While 93 percent of parents say it's necessary to stay in visual contact with a 2-year-old at all times, this figure drops to 80 percent of parents expressing this same necessity with a 6-year-old and then to only 42 percent with a 10-year-old.

Our research tells a grim story of parents' lack of understanding of the dangers of pool and spa drains. The research also suggests parents' confidence in their children's safety while swimming may be higher than their children's abilities in the swimming pool, leaving children exposed to unnecessary risks.

VI. Conclusion

Drowning is a complex issue with no single safety device or solution that works in all cases. Pool and spa safety requires a multifaceted strategy, including *active supervision by a designated adult, safe water environments and public education*, to ensure children's safety in and around water. Safe Kids commends this Subcommittee for convening this important consumer safety hearing and we look forward to working with you on any legislative initiatives and educational efforts designed to reduce the incidents of drowning.